

Figure 1 consists of 12 sub-graphs labeled (a) through (l), each showing the growth of *E. coli* O157:H7 in ground beef under different treatment conditions. The y-axis for all graphs is \log_{10} CFU/g, ranging from 0 to 10. The x-axis is time in hours, ranging from 0 to 120. The graphs show various growth curves, with some treatments showing significant growth inhibition compared to the control.

- (a) Control: Shows a steady increase in bacterial count from approximately 10^1 to 10^8 CFU/g over 120 hours.
- (b) Heat: Shows a rapid initial increase in bacterial count, reaching approximately 10^8 CFU/g by 120 hours.
- (c) Heat + NaNO₂: Shows a rapid initial increase in bacterial count, reaching approximately 10^8 CFU/g by 120 hours.
- (d) Heat + NaNO₂ + NaCl: Shows a rapid initial increase in bacterial count, reaching approximately 10^8 CFU/g by 120 hours.
- (e) Heat + NaNO₂ + NaCl + Na₂SO₃: Shows a rapid initial increase in bacterial count, reaching approximately 10^8 CFU/g by 120 hours.
- (f) Heat + NaNO₂ + NaCl + Na₂SO₃ + Na₂CO₃: Shows a rapid initial increase in bacterial count, reaching approximately 10^8 CFU/g by 120 hours.
- (g) Heat + NaNO₂ + NaCl + Na₂SO₃ + Na₂CO₃ + Na₂EDTA: Shows a rapid initial increase in bacterial count, reaching approximately 10^8 CFU/g by 120 hours.
- (h) Heat + NaNO₂ + NaCl + Na₂SO₃ + Na₂CO₃ + Na₂EDTA + Na₂PO₄: Shows a rapid initial increase in bacterial count, reaching approximately 10^8 CFU/g by 120 hours.
- (i) Heat + NaNO₂ + NaCl + Na₂SO₃ + Na₂CO₃ + Na₂EDTA + Na₂PO₄ + Na₂SiO₃: Shows a rapid initial increase in bacterial count, reaching approximately 10^8 CFU/g by 120 hours.
- (j) Heat + NaNO₂ + NaCl + Na₂SO₃ + Na₂CO₃ + Na₂EDTA + Na₂PO₄ + Na₂SiO₃ + Na₂AlO₂: Shows a rapid initial increase in bacterial count, reaching approximately 10^8 CFU/g by 120 hours.
- (k) Heat + NaNO₂ + NaCl + Na₂SO₃ + Na₂CO₃ + Na₂EDTA + Na₂PO₄ + Na₂SiO₃ + Na₂AlO₂ + Na₂FeO₄: Shows a rapid initial increase in bacterial count, reaching approximately 10^8 CFU/g by 120 hours.
- (l) Heat + NaNO₂ + NaCl + Na₂SO₃ + Na₂CO₃ + Na₂EDTA + Na₂PO₄ + Na₂SiO₃ + Na₂AlO₂ + Na₂FeO₄ + Na₂VO₄: Shows a rapid initial increase in bacterial count, reaching approximately 10^8 CFU/g by 120 hours.

FIG.1
BACKGROUND ART



